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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/729,983	12/09/2003	Hiroyuki Nagasawa	246309US90	2228
22850	7590	03/29/2006	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.			ANDUJAR, LEONARDO	
1940 DUKE STREET			ART UNIT	
ALEXANDRIA, VA 22314			PAPER NUMBER	
			2826	

DATE MAILED: 03/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/729,983	<b>Applicant(s)</b> NAGASAWA, HIROYUKI	
	<b>Examiner</b> Leonardo Andújar	<b>Art Unit</b> 2826	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 December 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 16-18 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 19-25 is/are allowed.
- 6) ☒ Claim(s) 1,3-6,8,10-13 and 15 is/are rejected.
- 7) ☒ Claim(s) 2,7,9 and 14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/04</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

1. Applicant's election with traverse of Group I, claims 1-14 and 19-25 is acknowledged. The traversal is on the ground(s) that the subject matter of claims 1-25 is sufficiently related that a thorough and complete search for the subject matter of the elected claims would necessarily encompass a thorough and complete search for the subject matter of the non-elected claims. This is not found persuasive because referring to the restriction requirement set forth in the Office Action sent on 12/08/2005, it clearly shows that the alternative product proposed by the examiner would be distinct from the product claimed. Additionally, the search is not coextensive as evidenced by the different fields of search for the process and product as cited in the previous restriction requirement. Furthermore, Applicant has not provided a convincing argument that the materially different processes would not be suitable in producing the claimed device. Note that the unpatentability of the Group I invention would not necessarily imply unpatentability of the Group II invention. Thus the requirement is still deemed proper and is therefore made FINAL.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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3. Claims 1, 3-6, 8, 10-13 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakano et al. (US 6,475,456).

4. Regarding claims 1 and 8, Nakano shows a semiconductor that consists of a compound single crystal and comprises a region (referred to as "high-defect-density region", hereinafter) having a planar defect density of  $1 \times 10^7 \text{cm}^2$  or more and a region (referred to as "low-defect-density region", hereinafter) having a planar defect density  $1 \times 10^7 \text{cm}^2$  of or less (col. 13/lls. 33-65).

5. Regarding claims 3 and 10, Nakano shows that a plate shape having at least one pair of opposite surfaces that are roughly parallel (right, left), on one surface (referred to as "high-defect-density surface", hereinafter) of which, the high-defect-density region is exposed, and, on the other surface (referred to as "low-defect-density surface", hereinafter) of which, the low-defect-density region is exposed (see table 15).

6. Regarding claims 4 and 11, Nakano shows that the planar defect is at least one anti phase boundary (see fig. 1).

7.

8. Regarding claims 5, 6, 12 and 13, Nakano teaches that the compound single crystal is SiC (abstract).

9. Regarding claim 15, Nakano shows that the semiconductor comprises a high density region and a low defect density region in this order on a substrate.

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***Allowable Subject Matter***

10. Claims 2, 7, 9 and 14 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. Claims 19-25 are allowed.

***Conclusion***

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonardo Andújar whose telephone number is 571-272-1912. The examiner can normally be reached on Mon through Thu from 9:00 AM to 7:30 PM EST.

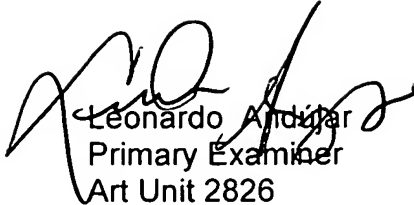
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan J. Flynn can be reached on 571-272-1915. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Leonardo Andujar  
Primary Examiner  
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